IN THE CLAIMS

What is claimed is:

1. An exciter system for inducing evanescent waves within an enclosed structure including a conductive framework, the system comprising:

   an exciter device situated with the structure and in proximity to a portion of the conductive framework, the exciter being directed toward said portion of the conductive framework;

   means for exciting said exciter at a frequency so as to induce evanescent waves within the conductive framework.

2. The exciter system of claim 1, wherein

   said exciter is spaced apart from said portion of the conductive framework by a distance of less than $\lambda/8$ where λ is the wavelength corresponding to the highest frequency at which said excited is intended to be excited by said means for energizing.

3. The exciter system of claim 1, wherein

   said exciter has an effective diameter of conductive portions which is less than $\lambda/8$ where λ is the wavelength corresponding to the highest frequency at which said excited is intended to be excited.

4. The exciter system of claim 1, wherein

   said portion of the conductive framework opposing said exciter is associated with a wall of the structure and said exciter is situated approximately equally spaced between the associated floor and the ceiling.

5. The exciter system of claim 1, wherein

   energy is delivered to said exciter through a coaxial cable, with a center conductor of said coaxial cable being electrically connected to said exciter and a shield portion of said coaxial cable being electrically connected to ground through said portion of the conductive framework.

6. The exciter system of claim 1, wherein

said exciter is a hemispherical exciter unit, including a conductive bowl portion, and one or more angularly derived sector portions.

7. The exciter system of claim 6 wherein

at least two of said angularly derived sector member are provided, each said angularly derived sector member being electrically connected to said conductive bowl along the rim thereof and all of said angularly derived sector members meeting at a common feed point situated approximately on an axis of said hemispherical exciter; and

energy is delivered to said exciter though a coaxial cable, with a center conductor of said coaxial cable being electrically connected to said feed point and a shield portion of said coaxial cable being electrically connected to ground through said portion of the conductive framework

8. The exciter system of claim 1 and further including

a curtain member conductively attached to said exciter for effectively increasing the size thereof and enhancing performance at low frequencies.

9. The exciter system of claim 1 wherein:

a conductive component of said conductive framework is situated within a wall of the enclosed space;

said exciter is held in a position spaced apart from said conductive component by a spacer; and

excitation energy is delivered to said exciter along one portion of an electrical circuit while a second side of said electrical circuit is connected to said conductive component situated opposite said exciter.

10. A method for inducing evanescent waves in a conductive framework in an enclosed space, comprising:

locating a portion of the conductive framework within a wall of the structure, and selecting a segment which is situated approximately equally

intermediate at the upper and lower extents of said wall;

mounting an exciter at a location opposite said segment, and separated therefrom by a separation distance; and

exciting said exciter at a frequency or multiple frequencies within a range, said range being characterized such that the upper extent thereof has a wavelength greater than the cut-off wavelength determined for the particular enclosed space.

11. The method of claim 10 wherein

said separation distance is less than $\lambda/8$ where λ is the wavelength corresponding to the highest frequency within said range.

12. The method of claim 10 wherein

said exciter has an effective diameter of conductive portions which is less than $\lambda/8$ where λ is the wavelength corresponding to the highest frequency within said range.

13. The method of claim 10 wherein

the evanescent waves induced in the conductive framework are caused to be modulated at selected frequencies within said range so as to carry information thereon to devices attuned to said selected frequencies.

14. The method of claim 10 wherein

said exciter is excited by delivering excitation energy thereto in a magnitude determined for the particular enclosed space such that the evanescent waves are detectable at usable levels throughout the enclosed space.

15. An exciter for use in conjunction with a conductive framework in an enclosed space, comprising:

a conductive element having a cross sectional shape of a semicircle, having a rim portion with the open side of said semi-circular element facing a portion of said conductive framework;

angular conductors extending from said rim portion to a feed point situated intermediate from said conductive element and said conductive

framework; and

signal circuitry having one side thereof connected to said feed point and the other side thereof connected to said conductive framework.

16. The exciter of claim 15 wherein

said conductive element is in the form of a hemispherical conductor and said angular conductors are in the form of a pair of angularly derived sectors.

17. The exciter of claim 15 wherein

said conductive element and said angular conductors are in the form of a conductive trace arrayed on a planar surface.

18. The exciter of claim 15 and further including

a conductive curtain conductively attached to said conductive element to increase the effective size thereof and to enhance effectiveness at lower frequencies.

19. The exciter of claim 15 and further including

a spacer, electrically isolated from the exciter, for supporting the exciter at a separation distance from said conductive framework, said separation distance being selected for optimizing a sensitized relationship between the exciter and said conductive framework, such that electromagnetic waveforms within a dimensionally determined frequency range for the enclosed space are preferentially exchanged between the exciter and the conductive framework.

20. The exciter of claim 19 wherein

the exciter operates in an exciter mode when said signal circuitry is utilized to carry excitation current to the exciter so as to induce waveforms in said conductive framework; and

the exciter operates in a listener mode when waveform signals within said dimensionally determined frequency range carried in said conductive framework are delivered by the exciter through said signal circuitry.